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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,519	04/02/2004	Tadamitsu Sato	9281-4800	4866

7590 07/27/2007

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EXAMINER	
CHOWDHURY, AFROZA Y	
ART UNIT	PAPER NUMBER
2629	
MAIL DATE	DELIVERY MODE
07/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/817,519	SATO ET AL.	
	Examiner	Art Unit	
	Afroza Y. Chowdhury	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 May 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *2/9/2007, 4/2/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's amendment received on **May 9, 2007** has been entered. Claims 1-10 are currently pending. Applicant's newly added claims and arguments are addressed herein below.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1 and 4–10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujiwara et al. (US 2003/0102875).

As to claim 1, Fujiwara et al. discloses an input device comprising:

a plurality of electrodes arranged in a circumferential direction at equal intervals and having a predetermined area (abstract, fig. 6-8, page 1, [0008], page 3, [0052] – [0054]);

an insulating sheet laminated on surfaces of the respective electrodes (page 1, [0010] – [0011], page 2, [0041]);

and capacitance detecting means provided for each electrode so as to detect from the respective electrodes when a variation in capacitance between the electrode and a portion of the human body when a portion of the human body is adjacent to or in contact with an external surface of the insulating sheet (page 1, [0012], [0019], fig. 4, pages 2 – 3, [0045],], [0048] – [0049]).

and the capacitance detecting means to detect switching due to approach or contact of a portion the human body to each electrode (page 5, [0066], [0067]),

wherein detecting means include the information of an operating direction, an operating speed, and/or a contact time, by the combination of detection of switching (page 5, [0066], [0067]).

Fujiwara et al. does not explicitly teach a control unit that receives a detection signal and detects operating information.

However, it would be obvious for the input device of Fujiwara et al. to have a control device to receive detection signal from the capacitance in order to perform calculations (operating information) regarding the capacitance detecting means.

As to claim 4, Fujiwara et al. teaches an input device wherein the capacitance detecting means detects a variation of a facing area between one of the electrodes and the portion of the human body (pages 2 – 3, [0045], [0048] – [0049]).

As to claim 5, Fujiwara et al. discloses an input device wherein the capacitance detecting means detects a time when the electrode faces the portion of the human body

(pages 4-5, [0059], [0066], fig. 4).

As to claim 6, Fujiwara et al. teaches an input device wherein detecting means detects switching information on the plurality of electrodes simultaneously tapped ([page 3, [0048] – [0049]).

As to claims 7, Fujiwara et al. discloses an input device wherein portions of the surface of the insulating sheet that are opposite to the electrodes are concaved or convexed from the surface of the insulating sheet (fig. 10, page 4, [0058]).

As to claims 8, Fujiwara et al. teaches an input device wherein an entire operation region in which the plurality of electrodes is provided is concaved or convexed from regions other that the operation regions (fig. 10, page 4, [0058]).

As to claim 9, Fujiwara et al. discloses an input device wherein marks for indicating positions of the respective electrodes are printed on the surface of the insulating sheet (page 2, [0046]).

As to claim 10, Fujiwara et al. teaches an input device wherein a region in which the plurality of electrodes is formed is provided with a rotating body rotating around a center of thereof (fig. 6-8, page 1, [0009], page 3, [0052] – [0054]).

4. Claims 2–3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujiwara et al. (US 2003/0102875) in view of Gillespie et al. (Patent Number 5880411).

As to claims 2 and 3, Fujiwara et al. discloses an device wherein electrostatic capacities can be converted into frequencies by means of means of C/F translate circuits or into time delays by means of delay circuits (pages 4-5, [0059], [0066], fig. 4).

He does not explicitly teach clock signal generating means for generating a clock signal, and delay means for delaying the clock signal according to the capacitance detected from the electrode when the human body is adjacent to or in contact with the external surface of the insulating sheet.

However, it is obvious to generate clock signal and delay clock signals in order to configure C/F translate circuits or time delay circuits.

Fujiwara et al. also does not teach smoothing means for generating a smoothed signal according to a delayed amount, based on the clock signal which does not pass through the delay means, and A/D converting means for analog-to-digital converting the smoothed signal according to an amount of the variation of capacitance.

Gillespie et al. discloses smoothing and A/D converting signals (fig 3, 7, page 13, lines 54-63).

Therefore, it would be obvious combining Gillespie's technique with Fujiwara's to generate generating a smoothed signal according to a delayed amount, based on the clock signal which does not pass through the delay means, and converting the

smoothed signal using A/D converter according to an amount of the variation of capacitance.

Response to Arguments

5. Applicant's arguments filed **May 9, 2007** have been fully considered but they are not persuasive.

Applicant is arguing that the reference does not teach a vertical staged arrangement. However, Applicant never claimed a vertical staged arrangement.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Afroza Y. Chowdhury whose telephone number is 571-270-1543. The examiner can normally be reached on 7:30-5:00 EST, 5/4/9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on 571-272-2600. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AC

7/9/2007

AMARE MENGISTU
SUPERVISORY PATENT EXAMINER